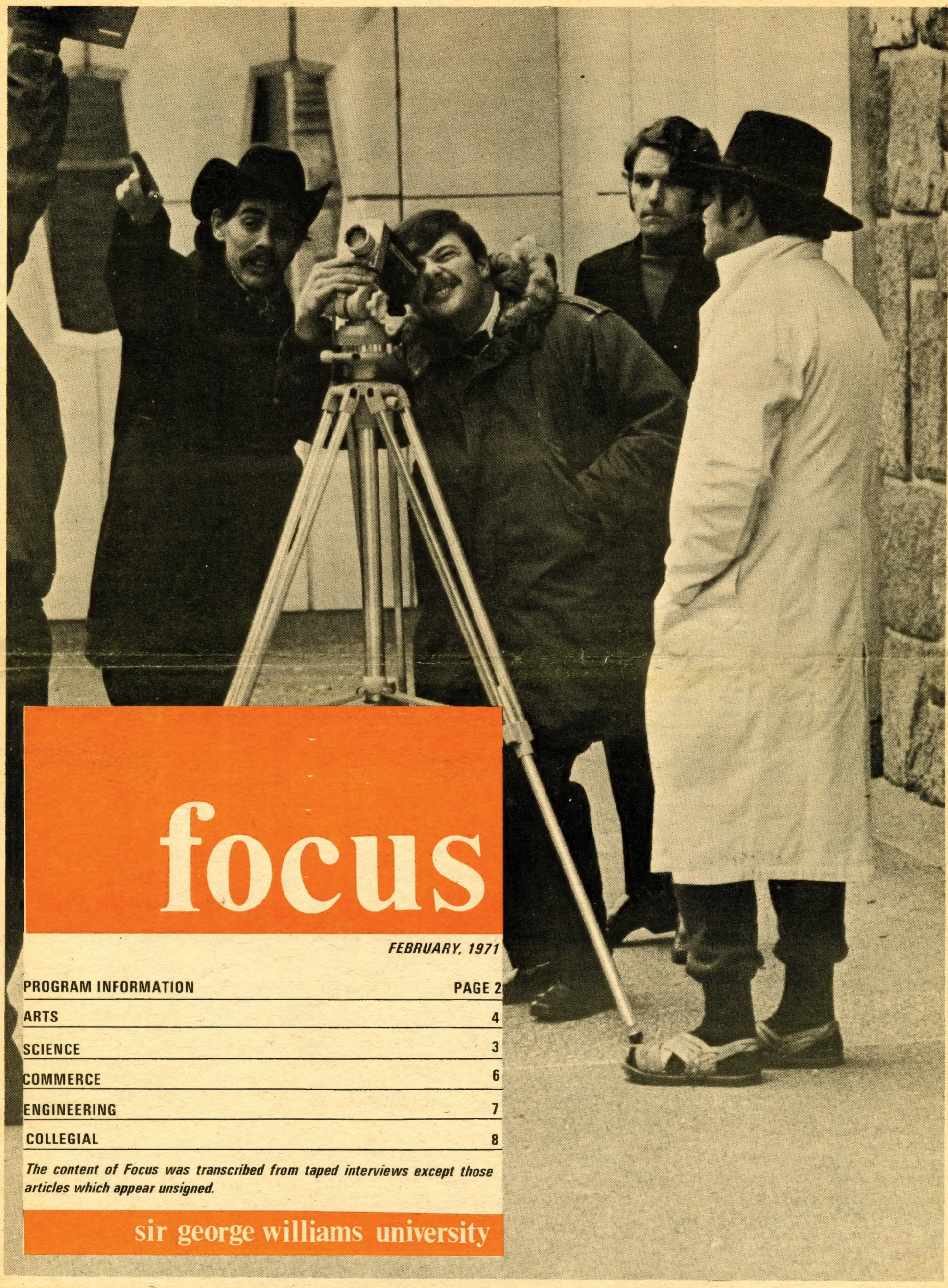


focus

FEBRUARY, 1971

The content of Focus was transcribed from taped interviews except those articles which appear unsigned.

sir george williams university

programs

The new three year undergraduate program begins September in both the Day and Evening divisions, aligning Sir George Williams with the new structure of higher education in Quebec. The new program follows completion of the two year CEGEP program. Though important undergraduate program changes have been made, the existing faculties - Arts, Science, Commerce & Administration and Engineering - will remain.

The undergraduate program will offer students opportunity to concentrate on one or two areas of interest, though in most faculties students will find it possible to construct a broader and less specialized program.

The academic year will continue to be made up of two winter terms of 13 weeks *exclusive* of examinations and a range of summer programs including the nine week evening summer session and day summer institutes. The new program will continue to be based on the acquisition of a certain number of course-credits so that the academic year will not normally be a quantitative measure of progress.

Admission requirements (Day and Evening)

1. Successful completion of CEGEP studies, with the collegial studies diploma. (SGWU students must complete ten credits as outlined on pages 23-27 of the 1970 - 71 Collegial Announcement).

2. Successful completion of specific courses required for entry into a specific (major) program (the pre-university "profiles" are found in the Department of Education booklet "Enseignement collegial 70 - 71" or in the SGWU Collegial Announcement). Students applying for joint majors are required to complete one profile and any other prerequisite required for study in the program.

Those applying to Arts programs who have not completed specific profiles but who have completed the general requirements (1) will be admitted to other major programs with the approval of the department, space permitting. Science, Engineering and Commerce applicants are expected to meet all requirements but no shortage of space is expected.

A "Mature Student Qualifying Program" will be introduced in September 1971 for students who reach the age of 21 by Sept. 1 of the proposed year of entry and who have not completed CEGEP studies. Students who successfully complete six full courses (or the equivalent in half courses) will be admissible to the first year of the undergraduate program. The precise content of the preparatory program will be published shortly. It will cover prerequisites required for undergraduate study and a range of electives.

Arts

All students will, upon entry into the undergraduate program, register for one of the following: a departmental major, a joint major, an interdisciplinary major, an honours program, a combined honours program, an interdisciplinary honours program.

A major is a pattern of courses, successful completion of which is all that is required to obtain a degree.

Honours programs combine a higher degree of concentration with a higher required level of performance; students who do not maintain this level may have to withdraw from the Honours program, in which case they can, of course, still proceed to a degree with a major.

Students contemplating Honours will register upon entry in an ***Honours Program*** and will apply at the end of their first year to be accepted as an ***Honours Student***.

It should be noted that an Honours degree (or the equivalent) is normally required for entry into graduate work.

A list of the programs appears below. The B.A. and B.F.A. degrees will require fifteen courses. Within this 15-course requirement, single majors will contain not less than seven courses and not more than ten (including prerequisites). Joint majors will normally be made up of two sets of five courses. Single honours programs will contain not less than eight and not more than eleven courses, while combined and interdisciplinary honours programs will contain a minimum of ten courses and a maximum of twelve. The number of specifically designated courses will vary from program to program, as will the number of electives. In order to avoid the narrowness that can result from over-specialization in a single discipline, all students will take at least four courses outside their department of concentration (with the exception of students taking combined honours programs which attain the same objective by different means).

Courses will be divided into two, and in some cases three levels, and a maximum of eight lower-level courses will be permitted.

The following honours and major programs are planned:

Single Honours:

Economics (incl. Mathematical Economics option), English, French, Geography (Economic, Human or Physical), History, Mathematics, Philosophy, Political Science, Psychology, Religion, Sociology, Statistics.

Combined Honours:

Education and Philosophy, English and Philosophy, English and Religion, History and Religion, Philosophy and Religion, Religion and Sociology, Philosophy and Sociology.

Interdisciplinary Honours:

Russian Studies, Urban Studies.

Departmental Majors:

Applied Social Science, Art Education, Art History, Art History and Studio Art, Canadian Politics, Comparative Political Studies, Early Childhood Education, Economics, English, Fine Arts, French, Geography, German, Graphic Design, History, Humanities of Science, Mathematics, Philosophy, Political Science, Psychology, Religion, Social Welfare, Sociology, Spanish, Statistics, Theatre Arts, Visual Arts.

Joint Majors:

Any two of - Applied Social Science, Art History, Economics, Education, English, French, Geography, German, Greek, Hebrew, History, Humanities of Science, Judaic Studies, Latin, Linguistics, Moving Pictures, Music, Philosophy, Political Science, Psychology, Religion, Russian, Sociology and Anthropology, Spanish, Theatre-Arts, Visual Arts.

Interdisciplinary Majors:

Canadian Studies, International Affairs, Political Philosophy, Urban Studies.

As at present, specialization in Mathematics or in Psychology can be carried on within either the B.A. or the B.Sc. degree program.

Science

Pending the introduction of a credit system designed to recognize more adequately the different components of lectures, laboratories, etc. in assessing the student's work-load, the Bachelor of Science degree will be awarded on the successful completion of fifteen full courses (or the equivalent in half-courses), ten of which must be taken in the Faculty of Science, the remaining five from any other Faculty.

Students may enter a general B.Sc. program, a major program or an Honours program. Major programs will be available in Biochemistry, Botany, Chemistry, Geology, Mathematics, Physics, Statistics and Zoology, and Honours programs will be available in Botany, Chemistry, Mathematics, Physics, Statistics, Zoology. It will also be possible to take Honours and major programs in Psychology within the B.Sc.

In view of the highly concentrated nature of the Honours programs in Science, students will have to make a decision on entry as to which Honours program, if any, they wish to pursue. Even major programs are likely to have a highly specialized first year, and a similar decision may well be required. Advice about the choice of program should therefore be obtained from the departments concerned during a student's second collegial year.

Commerce & Administration

The program for the Bachelor of Commerce degree is to consist of thirty-four term or semester (half) courses for an ordinary degree, and thirty-six courses for an Honours degree. It is planned eventually to introduce a credit system that recognizes both formal and personal work in estimating the value, in terms of work-load, of each course. All students will be required to register for an Honours or a major program. The available areas of specialization will be Accountancy, Economics, Finance, General Business, Management, Marketing, Quantitative Methods. (Specialization in Economics is possible within both the B.A. and the B. Comm. degrees.)

The first year will be common to all programs, and will consist of two double semester courses (i.e. four half courses) in Accountancy, two semester courses in each of Behavioural Science, Business Statistics and Economics, and one in each of Computer Science and Business Research Methods. The second year will also be mainly a common year, with two semester courses in each of Behavioural Science, Finance, Marketing, Production and Quantitative Methods, and two Commerce electives. The third and final year will consist mainly of electives to be chosen in the field of specialization, together with required courses in Business Policy and Business Law.

Engineering

Under the existing system, the undergraduate program in Engineering requires five years of study after high-school graduation. When the new structure of post-secondary and higher education was introduced in the Province, the Engineering Faculties of the Quebec universities joined together to work out a common program structure, and they decided to adopt a system which will probably require for most full-time students four years beyond CEGEP graduation, but will permit some students to complete the program in three years - or in three and a half, where it is possible to offer courses in every semester (term). For a Day student taking eight terms to complete his program, the work-load is likely to be comparable to that in the Faculty of Science; for those completing it in six terms, it will be considerably heavier. It seems unlikely, on account of financial constraints, that in the immediate future this University will be able to offer courses that make it possible to spread the program over three and a half years.

As at present, all students will specialize in one of Civil, Electrical or Mechanical Engineering, and will normally be asked to indicate their preference prior to admission. Nevertheless, since the first term will be common to all, a final decision can be made during that term. The second term will be common for both Civil and Mechanical, with a single course variation in Electrical.

The degree program will be composed of a general required faculty core, constituting about 40% of the total, the balance being made up of department core courses and department electives.

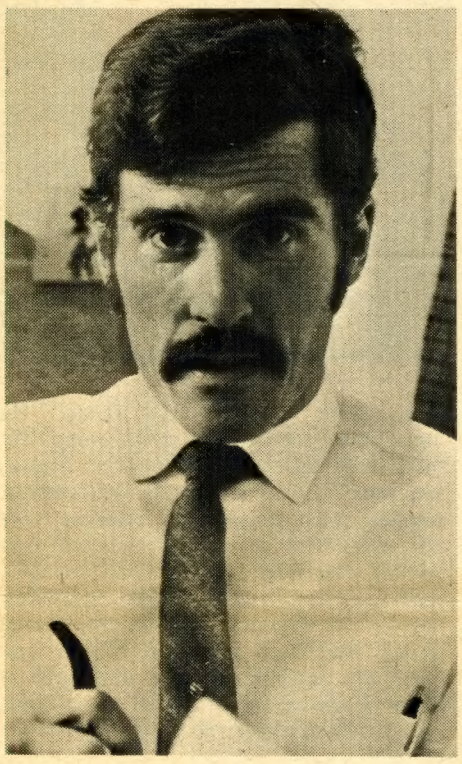
Given the present tight budgetary conditions, it is more than likely that space in certain disciplines will continue to be limited.

In Commerce and Engineering, which have common first-year programs, there should be no serious difficulty. In Science, where students' collegial experience should have made it possible to make well-founded choices, no serious problems are expected. In Arts, however, where pre-university prerequisites have deliberately been kept to a minimum, students may well not have had the opportunity to explore adequately their future field of study. Yet they are required upon entry into the undergraduate program to register in one of a variety of specializations. It is therefore strongly recommended that, unless they have made up their minds definitely about an Honours program, all students should indicate alternate choices in related or other fields.

In order to permit as much advance planning as possible by the University, Collegial II students will be asked, probably in the course of the first term, to indicate on a provisional basis the program which they would prefer to enter.

Meeting needs without greed

Gérard Leduc, Biology: One of my chief concerns today is the social implication of biology. This involves human welfare as a whole, not only the health of the individual but also a healthy environment. In the past social implications of biology were limited to health, medicine, and agriculture. Today I would say that human values are changing. It's not only important to have a highly successful economic and political system and to have healthy individuals, but there's more and more emphasis put on the quality of the environment as a human value. People are shifting their values from purely monetary ones to things which can not be evaluated in dollars and cents but things which promote a more enjoyable life.



A lot of people talk about this today. How long it will take for action depends on the normal evolution of thinking, especially in our society where technological achievement was given so much emphasis without any regard for its implications. We've been raised to try to get the most profit the cheapest way. But if you live in a certain environment you do alter the environment one way or another. If you want to clean up the environment whether as a society or on the individual level, it costs something in terms of dollars or effort. It takes some effort to put trash where it belongs. In terms of dollars, the same thing is obvious in terms of treatment of our waste. We're facing a situation where it's useless to think of hoping to correct the present situation just by treatment. Treatment only achieves a partial solution. Increasing production causes deterioration of our environment in many ways. To hope to solve the problem by miracle treatment techniques and stronger legislation will simply perpetuate the problem, because the actual amount of pollutants is continually increasing.

The hope is through a long arduous way of public education not only on the question of cleanliness, but also in attitudes toward consumption. The trash we have all around is a result of our production and consumption. And as long as we want to maintain this level of production and to continue to consume the kind and quantity of goods we're consuming today, we will maintain an undesirable situation. The only hope is to cut down on the overall production, consumption, and people. I have to be clear here. It's not a question of cutting down in a negative way but restraining from the unlimited growth in which we are engaging. We have to attain an overall levelling in growth. We have to attain a state of equilibrium where our production, consumption and people meet our daily needs so that we can hope to contain the effects of our problems.

We're faced with continuing change of environment in terms of quality but at the same time we have to cope with large populations which are underfed. Biology has a tremendous social implication regarding the food problem of the world. Obviously one way to try to cope with the problem is to try to restrain the unlimited growth of the population. But there are also areas which have not been fully explored yet in scientific achievement to try to improve food production with the means we already have. Food production in the ecological sense of the word depends on the transformation of available energy that we have on earth. At the moment we are not making use of the energy we have in order to produce food. But there are limits. Improved agricultural technology would result from basic biological research on the requirement of the plant and the performance of the plant as a whole: plant production as a source of food. You can develop new strains of plants which are more resistant to certain disease or certain climatic factors which now prevent the use of certain plants as a food resource. The same thing can be done with animals which are produced for human consumption. We're stuck with a food problem in the world and we have to take radical measures if we're really sincere with ourselves to try to correct the situation. One way to do it is to keep basic research programs which will eventually lead to some breakthrough in overall agricultural technology which is the basis of our food. There are other possibilities, artificially synthesized proteins, for example the synthesis of protein from petroleum deposits.

There are some possibilities of exploitation of the sea but there you have to be very careful. One tends to overlook the limitation of the marine environment. Sometimes we think we have the sea as our food supply for future years, but this is limited because the marine environment has its own biological limitations in the same way we have limitations on earth. The danger is in over-exploitation. The whole system is based on how much energy is available and we have just so much in our biosphere. If you remove half of a certain organism, the other half of which is staying behind depending on them for food, it could lead to a serious drop in the overall biomass.

Digging deeper and deeper

André Deland, Geology: Geology is very important to the economy of Canada and I would like to see more people going into it. Half the working people in Quebec are directly or indirectly connected with the mining industry, and there's a great demand for geologists. Another important aspect is summer jobs, with government surveys or exploration with companies in mining or petroleum. Last year almost all students had a choice between two or three jobs. And field work is important in geology; most of our research is done in the field.

All of us are interested in the economic possibilities, whether we study rocks, minerals, geochemistry or geophysics. People living in Noranda, for example, are afraid, because the mines, unlike other natural resources, are not renewable. So a lot of these towns in the north have no future, they're like ghost towns. With the more advanced methods of prospecting, we're able to find more bodies at greater depths. But they're getting harder and harder to find, and the methods needed to find them are getting more and more refined.

People are afraid and they say in twenty years there won't be any oil or minerals left. But I don't think this is true. What we consider rich now would have been considered low-grade twenty five years ago. So twenty-five years from now there will still be deposits, but mined at a lower grade. Twenty five years ago they were mining 6 per cent copper; now we're mining one or two per cent copper; twenty five years from now they may be mining only one half per cent copper. We may have to pay more to extract it or find it and perhaps synthetics will be cheaper. But for the moment there is a future, because we need people who are ingenious to find the deeper deposits. It's difficult to say what geology will be like twenty-five years from now. Perhaps instead of carrying one hundred pounds of rock back from the moon they'll be carrying tons and tons of the stuff.

The future is going to be based on the person in the sciences knowing much more about other fields. My feeling is that students should broaden themselves a bit more, unless they're very dedicated personnel in research. There are those who believe in technology for its own sake and those who want to use it, not to have it use them. This is where the scientist comes in. He has an idea of the technology, that it's working for him, because he designed it, whereas the person who is non-scientific sees a great big monster out there. I don't say everyone should know how to put someone on the moon, but we should know the consequences of having done this. The science faculty, because of its requirements in the new university program, is flexible enough to allow a student to do this.

It seems to be happening more and more that our main job is out there in the world, not necessarily within these four walls. Out there in industry there are a group of people who have some knowledge, but they have a piece of equipment that requires more knowledge. Right now the university is the instructor, coming in to update that group of people so they can get on with their work. We should be prepared to set up something for people outside who come to us for advice. Of course the university still has to be ivory-tower in some respects, in that part of it which is research-oriented. In order to get that research you have to have a supply of people, which will be handled by the undergraduate part of the university.

But there's no reason why the university, in addition to providing people for that work can't also get out into the world and communicate with the general public.

Fred Bedford, Assistant Dean

A TREE GROWS ON THE THIRTEENTH FLOOR

Among the university's 100 or so laboratories is a greenhouse, containing a variety of plants in several closed-off areas. It is perched on the edge of the south side of the Hall Building on the thirteenth floor, overlooking de Maisonneuve Boulevard.

At the moment, the government of Quebec is primarily concerned with vocational orientation for every aspect of education. We in this faculty particularly have to frustrate this to some extent. It is true that eighty per cent of our graduates have their bachelor's degree as a terminal degree, and this is rightly so. A very great proportion of these are not going to go into jobs that are directly related to their education. But that isn't to say that it wasn't a preparation: in the older traditional view of liberal education, these are more civilized, liberalized, sensitive people, exposed to a discipline that makes them more ready to learn anything that they're thrown up against.

The whole system of majors implies that a general education may have had a very fine liberallizing effect, but could have the weakness that the individual will simply nibble, but never really seize hold of anything. So it's the feeling here that it may not be very important what a student studies, but he should have the experience of studying something to some reasonable depth where he's confronted with higher levels of complexity. He should be able to synthesize fairly large amounts of material, so he can be in a position to reflect back with some basis for sound and disciplined criticism.

A very large part of what we can do for the individual is contribute to his quality of life. And this very properly has a great deal to do with his leisure. Leisure is important at a lot of levels. There's evidence that large numbers of people, no matter what their jobs are, don't find them terribly rewarding. It becomes important that there be an area of life that is. Many people are going to be having a lot more leisure. And a lot are more able to use leisure now simply because there isn't as much of a drive to always be doing something as there used to be.

The university must attempt to widen individual capacities to cope with change and go on to master new things whatever they are. The idea is to have a sophistication of outlook which allows a person to make sense of whatever is taking place.

Ian Campbell, Dean

Getting past the bunk

R.W.G. Bryant, Geography: I look with a rather cold fishy eye on a certain number of activities which are now going on in the academic world. If a chap takes a number of degrees it seems to me that he has some sort of responsibility to the community to connect his theories with some practical results. I appreciate the need for a sound theoretical and scientific background, but I think people should be compelled from time to time to relate their work to some practical possibilities. There are far too many people in the academic world sitting on the part which Nature gave them for sitting on, developing theories and purely intellectual constructs and not ever asking themselves what on earth use is this. One should always take the theory with a great pinch of salt.

I know a place in Cornwall, England where pneumatic drilling equipment for mining and pneumatic compressors are produced in quantity and exported all over the world. Why do they make this sophisticated machinery in Cornwall? They do so because the Phoenicians discovered tin there two thousand years B.C. So there are several factories which continued mining in Cornwall for centuries until all the mineralized loads were completely exhausted and mining in Cornwall today is a matter of historical and geological interest only. But the company which started producing machinery in this remote village is still going right on doing it. The cost of transportation of this raw material is so small that it doesn't matter to them where they produce it. So it would be rather futile for geographers to sit and produce abstract theories as to the location of industry, saying the industry ought to be there, when in theory it's usually there but in fact it's somewhere else entirely. For reasons which have nothing to do with theories, but which are historical. Before producing theories about human activity you first of all have to have a good knowledge of history. Geography without history is a dead and bare and bleak thing. And history without geography is a matter for the birds. The proper study of geography is that which has been defined over the last three thousand years. It is a study of human activity in relation to the environment. The proper study of geography is all natural phenomena and the study of human activity in relation to that.

The geography of central Finland and that of Quebec and Northern Ontario is quite similar yet the historical development of Finland and Canada has been completely different. A simple thing like an ordinary farmhouse in Central Finland is a completely different thing from what it is in Quebec. How come? Well, you can't understand this by any theory, you've just got to examine the facts and look at them with a very careful eye on the historical development of the two communities. The Finns have had the Russians breathing down their necks for centuries and the Canadians have had the Americans breathing down their necks. I have very strong feelings that one should not attempt to understand the phenomena of human interactions without knowing something of the history of the community concerned.

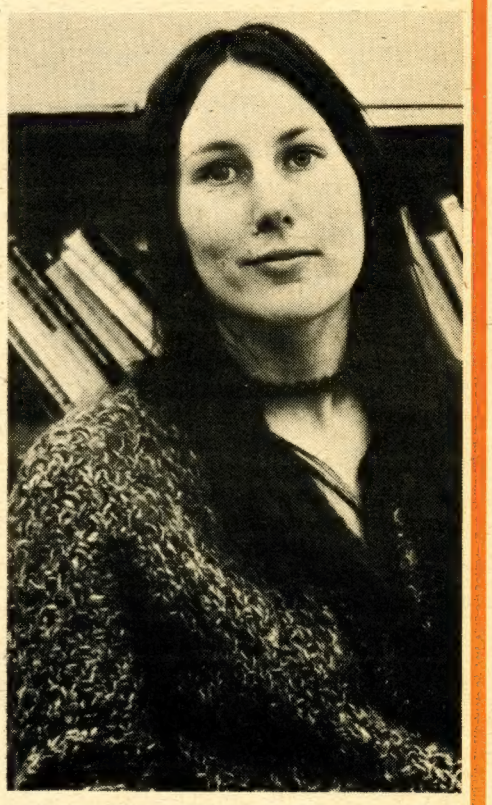
People who come along and say this is geography and this is sociology and this is economics and this is political science are talking way off beam because they all hang together. A person might come to be extremely expert in one field but he's not going to be any good at all unless he has sufficient breadth of outlook to be able to see that other fields of study have a tremendous amount to contribute. And so I take a book like William MacNeill's great book on the rise of the west, which is in fact a world history, and I say to my students in geography, don't take this as a fixed class text, but for Christ's sake, read it. The same goes for urban studies, which is a burgeoning field. A good architect is also a good geographer and a good ecologist. And if he isn't a good geographer and ecologist, he isn't a good architect: he's just a technician. The important thing is for people to realize that the branch is no good unless it's part of the tree. It's nice to have a theory but if you ride your theory like a hobby horse you're apt to get very queer results; because there are inevitably in the complexity of a real-life situation so many situations in which no kind of theory can hold any water. Therefore any theorist should be humble enough to say this is my theory as far as it goes; it attempts to explain, it attempts to provide a kind of framework within which I can insert the whole range of absurd phenomena.

Philosophy as therapy

Christine Garside, Philosophy : The first thing one can learn is what some of the great thinkers have said about problems of the world. The kinds of problems that I'm particularly interested in interms of existentialism are the problems of alienation; the problem of what is the self. How does value get into the world? Do we create it, do we discover it, is it already there? How does value fit into political action? What I want my students to get is first of all an understanding about what a particular philosopher has to say about the world. That means being able to read and read thoroughly.

But my primary interest is how the student is able to incorporate this world view into his own life. If it's not relevant at all to him, then I would feel it's somewhat of a waste of time. I see philosophy as primarily therapeutic.

In order for it to work, people have to be open to change; they have to want to thunk about themselves, deeply. A lot of students don't want to do that. I'm constantly referring to modern problems, although not specific ones. Nietzsche in Zarathustra examines all different kinds of people who are living the wrong way.



Kierkegaard does the same thing. He uses nineteenth century terminology. He talks about the aesthete, the kind of person who lives an immediate life, without stepping back to judge or evaluate it in any way. Now he doesn't speak of drug addicts, because drug addicts weren't that much a part of the social consciousness of the nineteenth century, but today we do. And there is a sense in which you could see someone who is immersed in living in the here and now as an aesthete, and could apply his terms today.

Nietzsche talked about people in the marketplace and the thing which I see as similar is the cafeteria, where people sit there and watch others come in. The relationships that they have at the table are primarily influenced by who comes and goes around them; it's not really any kind of true relationship for the most part. A lot of these parallels the students can see for themselves.

The 5th 'R' is Rubbish

D 10 The Seattle Times Sunday, April 12, 1970

That 4th 'R' Is Rafferty

Canada Has Her Share of Educational Idiocy in Montreal

By DR. MAX RAFFERTY
California Superintendent of Public Instruction

SACRAMENTO — Hoping to get a new and northern perspective on Education and its pressing problems, I whisked up to Canada the other day to clear my mind and settle my stomach. Lo! Upon arriving north of the border, I was splattered with the disconcerting, pie-in-the-face tidings that Sir George Williams University had instituted a new course on "graffiti," which consists of field trips by the students and their kindly professor to various public restrooms in the Greater Montreal neighborhood to inquire into the tired obscenities scribbled thereon by the comfort stations confessionalists. The idea, apparently, is that you can learn a lot about human psychology, to say nothing of more exotic inter- and intra-sexual relations, by examining the handwriting on the walls.

DR. RAFFERTY

Parenthetically, this is the first time since Belshazzar's Feast, to my knowledge, that anyone has been interested in deciphering mural penmanship, and certainly the leering literary lewdnesses so carefully chronicled by the William pornographiles can bear little if any resemblance to the majestically foreboding "Mene, mene, tekel, upharsin" so sonorously sounded by Daniel in the pages of the Old Testament.

IF SEXUAL DEVIATES are to be legitimized and given official blessings in our schools, why not criminal aberrants, also? It takes no great leap of the imagination, after all, to conjure up approved Mafia meetings, Cosa Nostra clubs or even Murder, Inc., dormitories as our increasingly dithering and futile college presidents scuttle further and further in the direction of stark madness. It is my considered conviction that some of them would try, in the sacred name of academic freedom, to reach a comfortable accommodation with hell itself.

I know exactly how the California taxpayers enjoy having their depreciated currency going to subsidize an educational institution where homosexuals are promoted. The taxpayer's don't like it, and that's the understatement not only of the year but of the decade.

What I haven't been able to find out as yet is how the Canadian citizenry is reacting to a university in their most populous city which encourages its instructors to lead their students into public toilets in order to analyze acres of moronic verbal garbage.

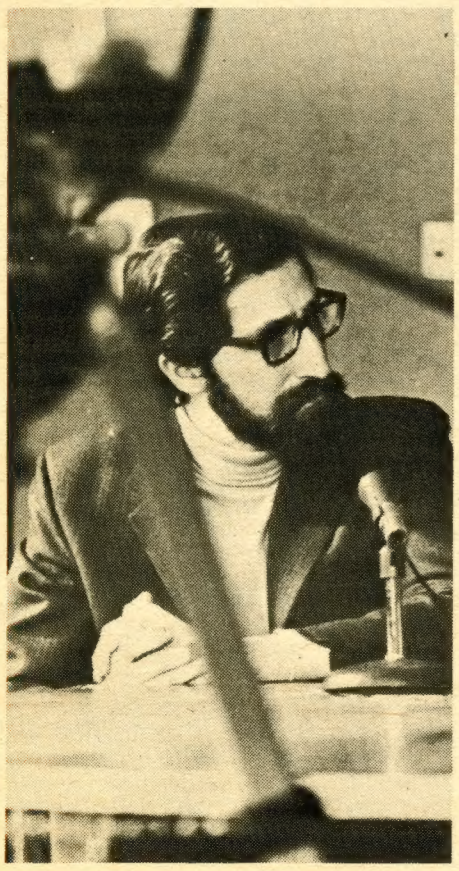
Ah, well. Perhaps this column will do the trick, and my Canadian readers will enlighten me. In any event, the Williams phenomenon should encourage our northern cousins to anticipate striking educational economies which could be effected in their colleges during the Seventies. After all, if higher education is to concern itself increasingly with such subject matter as this, it should be possible to replace today's millions of tax dollars with little more than tomorrow's pocketful of dimes.

(Copyright, 1970, Los Angeles Times.)

"We could use a garage"

Peter London, Fine Arts: What's happening in the arts today is a very different thing than it was previously. At one time the art student considered his aspiration to be a bohemian kind of life: rather carefree, rather irresponsible. And he chose his own way, lived outside on the fringes. And that's what you heard about, the carefree life and the parties and the candlelight. That's so completely passé now. I guess you get several kinds of kids. One is the dropout, who really does drop out and constructs his own fantasy world. That's something like the bohenian, but he's not having nearly as much fun.

The other person is the person who is well aware of what's happening and finds that he needs to be vital in the society. Not that he paints social realism or is a propogandist for a particular cause, but his art has a structure to it and a reality to it that is very poignant. Conceptual art has pointed out the usefulness of art as a truth-pointer or information-giver, rather than simply a titillating thing for pleasure. So the art is changing and the teachers are changing. They're not only talking about negative and positive space and thin and thick lines and complementary colours and so on; they're talking on larger scales now. We're working towards developing a meaning, pointing at a meaning or at info as well as doing it in a way which is articulate and therefore good. I hope it's beginning to percolate down to the students.



I'm not at all sure whether this type of place is terribly useful for a person who wants to pursue the arts. The visible environment is very similar to the high school and primary school environment. It almost totally consists of hallways, vertical and horizontal hallways, and classrooms. And there are many more kinds of spaces and conditions and times with which people need to come together. This kind of premises is all right for information gathering or retrieval. This school could very well be a place for research, both for the input of hard data and for the availability of criticism. For that this place serves well. For a place of work, it doesn't at all, except for graphics or sculpture.

It wouldn't be very hard at all to rent space and to have faculty there in residence and the kids would come in there, do what they have to do, and have a responsibility. They would be responsible for their coming and going and the upkeep of the place and the use of the materials. It would be their studio for that year. It could be a garage, a warehouse, anything that simply has space to do things. And these things can stay done for awhile. That would develop a sense of community. Here six days a week and for four sessions a day this space is used by different sets of people with different purposes, different abilities. This could be developed for very little money. The rental space here is four or five times what you can get just five or six blocks south, east or west of here. Then the kids could come here perhaps once or twice a week for common sessions where all the teachers and all the students could see what everybody else is doing; have a kind of group criticism. Art history can be taught that way too.

This doesn't happen now: you sign up for a course and you take that course. The brilliance of it is due to the teacher and what he does. The sparkling thing about this place is its faculty. We have an awfully alert staff, and they are very good teachers, which doesn't always go without saying. But if we could get conditions such that this transaction could be made on good ground among students and teachers, it would be better.

THEATRE'S JACK-OF-ALL-TRADES

Stage Supervisor Lucien Côté goes through his seven-day work week making sure that students aren't killing themselves falling from the rigging, teaching courses in general backstage work and keeping the stage functioning in top order.

"My one goal in life is to train someone to take over my work," he says. Côté went into the theatre life early, shortly after he quit his Grand Trunk Railway job because telephones were replacing call boys. From there he became an usher with a number of theatre houses around Montreal and in the late 20's moved several steps up the ladder as a film projector operator.

"I did have some parts in the theatre", Côté says, referring to his brief efforts as a chorus boy and in several other minor parts, "but I took stage fright and decided to stay backstage."

His backstage experience is long and varied, with technical work around the Montreal circuit of theatres and arenas, rigging them for lighting and other stage equipment. His work has taken him as far away as New York and London. "I can put on anything that Place des Arts can do except that we don't have as much depth here. But most of the time we can do the same thing," he said. Even with the 53-foot depth of the stage, Côté said Sir George can fly many thousand pounds of equipment. Lucien Côté likes it natural and this best explains his love of theatre work.

"Everything comes out of a can today," he says, explaining his abhorrence of things electric and loud. "For me, it's no fun getting my ears blasted." Modern theatre doesn't escape criticism either. "It used to be that people used themselves, their own voices. There are too many gimmicks today." The veteran stage technician feels that there could be a healthy future for the theatre even though it was livelier in the old days. "Time will bring back the theatre that television and movies have taken away."

The quiet, easy and productive revolution

George Davidovic, Economics: My main interest is the theory and practice of co-operation. Co-operation has aspects people are not aware of. It is a business organization just like any other. People come together with some money and supply their own business. But the other aspects are much more profound. Ordinary people change their social status. If you are a buyer in a department store you have a social status as a client, a buyer. If you work in a factory you are just a worker, a hand. But when you organize a co-operative, you become owner and operator of the shop, of the credit union, of the bank. You are a worker and an owner and operator at the same time. You have new rights and new responsibilities.

This means that there is an educational effect. If fishermen sell their goods to the merchant, they don't think; they just scramble to get the right price. But when they form a fisherman's co-operative, then they start to think what they can do, how to sell better, and they start to think in a broader way. It is not only an economic centre, it is an educational centre. The co-operative organizes central educational activities, technical and general. UNESCO has stated that the best organization for adult education is the co-operative movement. People can be educated just by working together: they discuss, they learn. So the co-operative not only improves one's social and economic level but also raises the educational level.

There is another very important aspect. The co-operative organization develops a democratic attitude. It is based on democracy: one man, one vote. At a meeting they discuss, they elect. No person has more rights than another. He may have more or less funds in the co-operative, be richer or poorer, but they are all equal and the co-operative is exercising democratic rights. So in the countries where the co-operative movement is most highly developed, democracy is very effective and strong. The movement has economic, social, political and educational repercussions.

Students should be aware of the possibilities of the co-operative movement. They are always protesting and criticizing the administration, the cafeteria, expensive books, lack of housing, and so on. But they can solve all their problems very easily. They can take over the cafeteria or bookstore or build their own housing. Where to get money is the question they ask and everybody else asks. But this is no problem at all if they want to act co-operatively. If every student in this university saved one dollar a week, that would mean they could create one million dollars every year. They could build housing, they could organize the money to run the cafeteria or bookstore or whatever. The co-operative movement is easy.

Workers can solve all their problems by taking over industry. They just have to form a co-operative and the money that will be put in the co-operative (1 to 10 per cent or as they decide) will gradually buy shares of the factory or enterprise. Collectively they can have ten or twenty per cent of the shares. With that percentage they can decide to be owners, because most of the other shareholders never come to the meetings, just as small groups of capitalists do carry on as owners of the business. In Finland 40% of the whole trade is in co-operative hands. In Canada 60% of the wheat is co-operatively handled.

This is a new subject and until recently has not been taught at Canadian universities. There was very little student response at first but the number has been increasing every year. I am no prophet, but I would guess that in half a century the main economic form will be the co-operative. This can build a new type of man, a man who co-operates, who sees in his neighbor a friend. This will result in a more stable society.

Essentially, our philosophy is that management and administration are universal phenomena, found in all organizations - businesses, governments, hospitals, universities, churches, armies, et cetera - and that a body of knowledge can be identified, the study of which will benefit students preparing for managerial and administrative careers.

For such a study, it is important for every student first to acquire a proper understanding of the basic disciplines. Following this he may select a particular discipline, study its theory, methodology and findings in depth and in doing so, he would "major" in one of the functional areas: Management, Marketing, Finance, Accounting, Quantitative Methods or another specialty.

Our Faculty does those things wherein it has a distinct comparative advantage. It is a wasteful and inefficient move for a university to try to replicate the on-the-job training that businesses themselves can best conduct in their own ways or to try to provide a pale substitute for business experience. What the university can do well is to develop the student's critical, analytical, problem-solving and decision-making capabilities; equip the student with the basic knowledge and analytical tools which will enable him to cope most effectively with the changes and situations that lie ahead. Accordingly, we should never attempt to teach details of current business practices for they may very well be outdated tomorrow. It is not our role to train students in a vocational sense; we can only prepare students to begin a lifelong apprenticeship in management and administration.

Bruce Mallen, Acting Dean

Being made aware of your rights

George Lane, Marketing: I would like to see all students in colleges or universities take at least one course in marketing. It may sound like a revolutionary idea but when you think about it, a lot of the American universities require all their students to take a course in political science, the idea being that everybody is a voter and therefore they should have a knowledge of their system of government and know what they're voting about. Marketing is a very two-sided discipline. It involves both buyers and sellers. We spend an awful lot of time and effort in our educational systems teaching people how to earn money but we don't do much about teaching them how to spend it. People are entering into the market place every day in their lives. There's an old notion that you see in economic textbooks about people voting with their dollars; it may be a cliché but its still true. If it's important for people to know how they're going to vote in the polling booth, it's important for them to know something about their votes in the marketplace.

This would dispel a lot of the myths that the general public has, notions that marketing can manipulate people; if you spend enough money on advertising you can sell anything. That's just a lot of nonsense. I think about that every time I get into my Edsel! People are influenced by a lot of things when it comes to purchasing decisions. They're made aware of what's available by advertising, but advertising isn't all-powerful. A lot of other influences come into play. With a course such as this, people would make better purchasing decisions. You read a lot of stories about people in the ghettoes who end up paying a lot more for particular goods because they're really aren't aware of the alternatives, of how the system operates, of what their rights are.

We're getting more legislation now that's going to end up having contracts (such as encyclopedia) more standardized so that there will be more rights built into the system. There are certain rights now, and I think people should know what those rights are and use circumstances to their own personal advantage. Eventually of course I would like to see this being offered at the high school level, but the high school teacher has to have some knowledge of this outside of his own experience. But let's start by expanding the number of people taking marketing courses in colleges.

Another advantage of this is that we have consumer groups, some of whom are very dedicated, but really they involve a very small percentage of the population. So when they try to get a new law passed or try to get industry to make some adjustment in their product or their policies, they're at a bit of a disadvantage because the government knows their numbers. I think to get changes in the system you need a lot of public support. This is one of the ways of increasing that public support. People who have studied this kind of material are going to be more interested in it. There would be a better chance of getting good laws, fair laws, good practices and fair practices.

One of the problems the consumer movement has had is that it has taken the road to remedy as being to change laws. That's certainly a valid alternative, but it's not necessarily the best. Perhaps simply publicising the errors of companies where consumers have grievances would be just as effective or more effective. We have some pretty good laws in the books that are rarely invoked and when they are invoked the penalities are like a slap on the wrist with a piece of wet spaghetti. Not that I want to hurt firms. This is one of the difficulties of going the legal route. It sets up a situation of confrontation, the adversary system, and there's a lot of misunderstanding on both sides. It's only in the last seven or eight years that we began teaching consumer behaviour in universities. Business men should understand the motives of the consumer and at the same time consumers should understand a little more about why we have marketing; what part it plays in the system, how marketing helps economic growth; how it's very instrumental in helping the country develop beyond the barter stage.

Marketing is one of the few things you can put your finger on that separates man from other animals. An animal in the forest, when he wants something, takes it. Man trades. And these are the only two ways: you raid or trade. The way of most species is to raid. Man is really the only species that has stumbled on to this concept of trade, which I think is a much more civilized way of acquiring things. So I think marketing is one of the things that facilitates civilization. You couldn't have a civilization without it.

Business survival rests on society's acceptance of it

Joe Kelly, Management: Psychology and sociology are particularly relevant to the study of organizational life. We look at the individual, the group, the organization. Personality is our starting point: you go on from there. It's a more humanistic point of departure. And we're hoping this will work out successfully, so that when students go into other courses, those courses will be more relevant to them.

Research methodology is important because we hope to have the student postured to do creative and original work in a business setting. We want them to develop a critical faculty whereby they can sift through the evidence, formulate some kind of hypothesis and carry out some form of test. We want them to be able to make use of library resources, and have experience in writing papers right at an early stage for a more creative and original approach to business studies. Business previously hasn't appealed as a study to students. But we're concerned with the social science of business, which means in effect that we want to make the student aware of the exciting developments in social science, then to apply them in the business setting. We want to widen the range of learning experiences.

A lot of people who go into commerce think they're going to learn accountancy and bookkeeping but they don't realize the wide range of opportunities that are open to them. They don't realize that some of them are going to become market researchers, systems analysts, personnel officers or labour specialists. They can't conceptualize what their options are. But in fact business is going to be the exciting area, because it's the area in which the U.S. and Canada are looking for programs which are relevant to the needs of society.

What they also don't realize is that when they're finished they're ready for a complete career right at the top of the whole professional system. What we are trying to do is give them a liberal education; there's no loss of academic excellence in the process. And there's a tremendous search to bring in new people. I've never been in a faculty of commerce before in my life; I'm an organizational psychologist, and it's a more exciting part of the field than double entry bookkeeping.

One of the ways of changing business is to change the human input into it. The business man, in assimilating these students has not only changed his sartorial style, external things, but there's a been a change in the value system. There's a movement towards bridging the gap. Businessmen are keenly aware that business can only survive in our society if it is in fact acceptable to society. There are two cores involved: the consumers and the University graduates the organizations are assimilating. There is a quiet revolution going on in business as it adapts itself. And that's an optimistic and exciting prospect.

Gearing engineering to society

We are attempting to educate a group of people to an understanding of the physical world. I hope there are two things they will learn about their role in society. The first is to provide a service to society in terms of solving problems on the physical level. The other is to provide some leadership to society as to where engineering should go on its behalf to employ technology in the best way in long-range terms. In order to have society accept the long-range point of view there have to be pressure groups. Attempting to forecast the effects of technology is something we're trying to develop in our students' consciousness.

On the more technical side, this means developing skills to solve society's problems, which is and will be the role of the engineer. Our attempt has been to develop within the student a fairly broad spectrum of understanding the physical world. This involves a series of courses on the faculty level that every student in every department will take. This means that the electrical student will have a fair understanding of other aspects of the physical world.

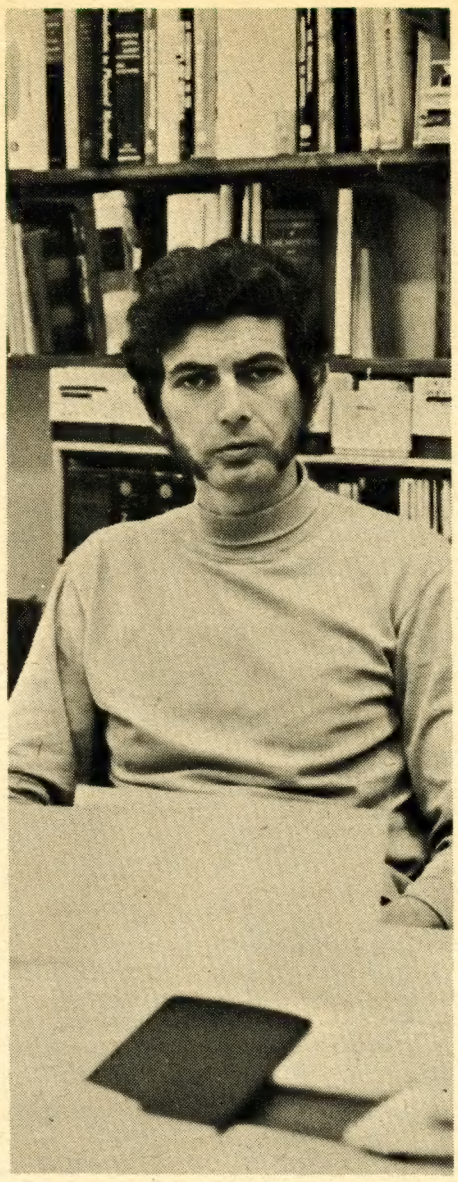
Beyond this, we provide the opportunity to develop a knowledge of a special area, a study of the problems of that area in depth : an up-to-date picture of one area rather than a textbook knowledge ten years out of date. Each department presents at least one in-depth study. The specialization of each department depends on the faculty competence and on the type of research programs going on in that department. The end result has been successful students favorably received in industry.

Clair Callaghan, Dean.

Hugh McQueen, Mechanical Engineering : I believe that science and technology have helped man considerably. They have given him machines which are capable of performing work for him, relieveing him of many of the burdens of labour. By relieving him of some of the simple functions they have given him the time to devote to some of the social developments and to pursuits for which he can use his intellect.

One of the problems is the secondary effects of technology. There's pollution, there's manufacture of goods which are of little value or quality, there is a rapid using up of our natural resources. I would like to make engineers more aware of the problems associated with technology. Social and ecological factors are just as important as technical factors in any engineering problem. Hopefully by exposing these kinds of things to the engineer, he can find ways of considering these factors in his everyday work. My course Engineering and Society attempts to do this, through readings and discussion of such writers as Lewis Mumford and Marshall McLuhan.

Obviously we want to motivate the student to try to solve these problems. One of the things he has to remember in trying to solve them is that one of the major aspects of all these problems is people. When he gets out into the world or into industry, there are people who have been working in that industry for a considerable amount of time who are used to operating in a certain way, and who don't like changing. This perhaps is an



even stronger consideration than economic aspects. One of the things that retard changes is people themselves in industry, although unwillingness to use money for things other than profit plays its part. The engineer, when he gets out of university, must be critical of what his company is doing in terms of pollution, manufacturing goods which are substandard, advertising in a manner which is erroneous, or other matters of this nature. When he sees these things he should analyze them carefully and try to find out how and why they arise. It's very important that he go through this step before complaining about it.

Then he should try to consider some solutions to the problem. It is only after he has worked out some solution that he should approach other engineers in the company.

This is the place where his engineering capacity is very important. If the engineers who are graduating today are really concerned about the problems, they will gradually change the situation and improve the situation. Of course economics is always a serious problem, but I think far too often in the past, engineers failed to submit proper proposals to those providing the money.

Equally important is the engineer's contribution to change outside the confines of the company where he works. The engineers's technical knowledge can play a part in the effectiveness of citizens' action groups. He should be willing to work with them.

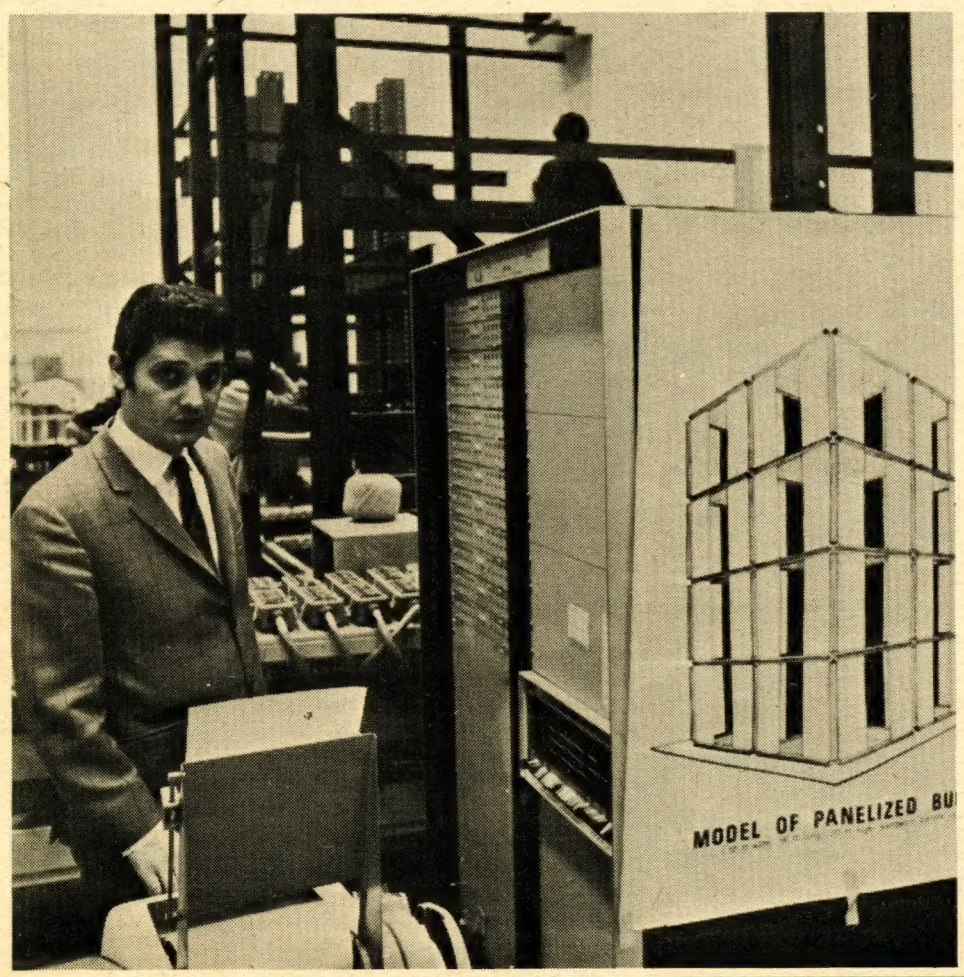
The tube breathes its last

B.A. Lombos, Electrical Engineering : Everybody knows microelectronics in connection with transistor radios. The invention of the transistor brought along a considerable revolution in electronics from the earlier vacuum tube techniques. It enabled electronic equipment to be smaller, lighter, more versatile, more reliable, less costly. If Sir George's computer were built with the old tubes, it would take up the entire Hall building! But the transistor was only the prelude to a much greater revolution – the monolithic integrated circuit. These self-contained, integrated circuits are replacing discrete systems as the basic components of electronic equipment. And the story does not stop here. The next step is the interconnection of a large number of these integrated circuits to form a complete electronic system while still within a single slice of silicon.

The most important factor in the early development of integrated circuits was the reduction in physical size and weight of equipment. This is particularly important in space application, in which every pound of weight saved means a reduction of the cost of the space vehicle of about $20,000.

With further development it has become apparent that the most important factor of all is improved reliability. A typical electronic computer may contain over 50,000 transistors and diodes. If one of these fails, the computer may be useless. But the maximum failure rate for these new devices is one in 50,000 devices per week.

This is one of the exciting aspects of the future for the electronic engineer. 80% of electronic devices use this system now; in the future it will be 100%. There is a desperate shortage in industry of people who understand and can build these systems. This university is the only one in Canada where micro-electronic technology is taught at the undergraduate level. Not merely an undestanding of the system is necessary, but we need people who can build it.



RESEARCH ON LOW COST HOUSING

The largest panelized building research model ever constructed is now going up ar Sir George Williams University. The model, a half-scale four story structure, will be used by SGWU's System Building Centre in its search for cheaper and faster systems of construction. Centre Director Paul Fazio sees the panelized building systems project developing innovations which could have a direct effect on the Quebec economy. Panelization is the construction of buildings using structural panels connected together directly, fully self-supporting without requiring a structural skeleton. The System Building Centre is determining the performance of such buildings under expected environmental conditions, understanding the stress flow in the elements and connections, and developing optimum panels and connection systems. The problems have been identified and solutions will now be proposed and verified on the research model. Because of the demand for low cost housing, industry has strongly supported the SGWU panelization research since 1967.

Humanities

The Humanities are concerned with man as an individual, just as the Social Sciences study him in his relationships with his fellowmen. They are concerned with him as a creative being, through study of literature and the Arts, including Cinema and Drama; as a thinking being, preoccupied with the reasons for his existence, the way in which he should conduct himself, and the processes of logical thought, through study of Philosophy and Religion; as a communicative being, through the study of language, both his own and those of other peoples. Literature presents a vast and rich panorama of human endeavour, with all its strengths and weaknesses. By the study of the actions and attitudes of other individuals, each of us can begin to arrive at one of the supreme goals of education, which is knowledge of and acceptance of self. In addition to this primary role, the Humanities also provide a wealth of preparation for the ever-increasing leisure time which modern technology is releasing.

Social Sciences

While the Humanities endeavour to show how the individual may learn to live with himself, the Social Sciences stress the problems of living with others. They are concerned with the role of the individual as a member of an organized group, and constitute a study of human society and its institutions. History is an interpretation of man's past records and the lessons which it offers to present generations; Economics is concerned with the production and distribution of material resources; Political Science studies the methods which men have developed to govern themselves; Sociology examines the behaviour and relations of groups such as the family and the community. Psychology, which began as an offshoot of Philosophy, one of the Humanities, is commonly rated as a Social Science, although much of its methodology is closer to that of the Natural Sciences.

Natural Sciences

The term "Natural Sciences" is used to cover a number of areas. The Biological or Life Sciences are concerned with all the varied aspects of living organisms - plants, animals and microorganisms. The Physical Sciences deal with the basic laws of the physical world, the properties of matter and energy in the world and in the universe. Mathematics, sometimes referred to as "the language of science", is an essential parts of any science program, and one of its most recent applications - computer science - is becoming increasingly indispensable. It should be noted that research activity, one of the principal scientific outlets, will normally require a post-graduate degree. Other courses are concerned with the relationships between Science, Man and Society under "Humanities of Science".

Commerce

The new undergraduate program in Commerce, which will begin in 1971-72, is deliberately based on a minimum of required courses at the Collegial level. Due to the increasing importance of Mathematics in business and industry a good grounding in this discipline is considered a necessity and the Collegial courses in Mathematics are therefore the only prerequisites for the Commerce program at University level.

This will enable the student to explore a broad field of knowledge during the pre-University years and the selection of courses will depend largely on his interests. The student could select a program of courses which would qualify him for other than Commerce options at the University level, thus leaving the final choice until after exposure to other disciplines. It is suggested, however, that an effort to improve knowledge of French language and literature as well as an exploration of the Social Sciences will prove beneficial to the majority of potential Commerce students.

Engineering

Engineering is a purposeful and creative activity. Engineers are characterized by the major role they play in bringing into being something which did not previously exist.

Engineers are fundamentally responsible for a major part of the physical conditions in which we live, and consequently affect our economic structure, our well-being, and even our ways of thought and our values. By constantly perfecting existing products and services and by developing new ones, they provide the means whereby Man, if he can learn to use them properly, can attain a full life in a just society. In Engineering programs allowance is made for studies outside the field in order to turn out graduates whose views are not limited by narrow specialization, but who are conscious of their role as members of society.

An engineering graduate can look forward to a challenging career in which he can gain personal satisfaction as well as reap financial rewards commensurate with his capabilities and willingness to assume responsibility.

Potential engineers should have competence in mathematics and physics or chemistry, not so much as "pure sciences", but rather as tools which all engineers are called upon to use in applying the materials and forces of nature to man's use.

sgwu

TELEPHONES

ADMISSIONS	**879-5955**
GUIDANCE	**879-2879**
REGISTRAR	**879-4235**

focus

Prepared and edited by the Information Office, Sir George Williams University, 1435 Drummond Street, Montreal 107, Quebec. Litho by Journal Offset, Ville St. Laurent. 111

Ginny Jones, editor